are applied to the gain functions, where the gain functions are not subjected to any special restrictions, which was the case in older papers (monotonic decrease or similarity with Green functions etc). Basing upon the theory of games it is shown that, if e.g. the gain function equals

$$\Phi(f_1 - f_2) = \varphi \exp(-\gamma|f_1 - f_2|), \qquad (31),$$

the optimum combined procedure may be described by

$$\xi_0(f_1) = \frac{1}{2+\gamma(W_2 - W_1)}\{\gamma + [\delta(f_1 - W_1) + \delta(f_1 - W_2)]\}, \qquad (32)$$

$$\eta_0(f_2) = \frac{1}{2+\gamma(W_2 - W_1)}\{\gamma + [\delta(f_2 - W_1) + \delta(f_2 - W_2)]\}.$$

The value of the game is then

$$v = \frac{2\varphi}{2+\gamma(W_2 - W_1)}. \qquad (33).$$

Determination of the Optimum Change in Carrier Frequencies of a Useful Signal and Noise in Detection of Problems on the Basis of the Theory of Games

S/103/61/022/001/004/012
B019/B056

From the discussion of these equations it follows that for a broad-band interference, if its spectral density agrees with the gain function up to one factor, the emission of a white noise produces a pronounced effect upon the interferences. The shift of the carrier frequency in a finite frequency range is jump-like. The study of this approximation of the games leads to the so-called finite or matrix games, whose solution methods are well known and are therefore here only outlined. Using the polynomials of S. N. Bernshteyn for the approximation of the gain function, the solution of the games studied may be reduced to the solution of the so-called "separable" games. As an example, the gain functions discussed here for broad-band interference and narrow-band interference under the assumption that the spectral interference density is a fractional-rational function, are approximated by means of Bernshteyn polynomials. The approximating polynomial in this case has the form

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Determination of the Optimum Change in Carrier Frequencies of a Useful Signal and Noise in Detection of Problems on the Basis of the Theory of Games

S/103/61/022/001/004/012
B019/B056

$$\Phi_n[(f_1-f_2)^2]=\Phi_n\left[\Delta W^2\left(\frac{f_1-W_1}{\Delta W}-\frac{f_2-W_1}{\Delta W}\right)^2\right]=\Phi_n[\Delta W^2(\nu_1-\nu_2)^2]=$$

$$=\Phi_n(\Delta W^2\Delta\nu^2)=\sum_{m=0}^{n}\Phi\left(\frac{m}{n}\right)C_n^m\Delta\nu^{2m}(1-\Delta\nu^2)^{n-m}, \qquad (40)$$

где $0\leqslant\nu_1\leqslant 1$, $0\leqslant\nu_2\leqslant 1$,

and by using the Newton polynomial one immediately obtains the separable gain function

$$\Phi_n(\Delta\nu^2)=\sum_{i=0}^{n}\Delta\nu^{2i}a_i(n)=\sum_{i=0}^{n}\sum_{k=0}^{2i}\nu_1^{2i-k}\nu_2^k a_{ik}(n), \qquad (41)$$

где $a_i(n)=\sum_{m=0}^{i}(-1)^{i-m}\Phi\left(\frac{m}{n}\right)C_n^m C_{n-m}^{i-m}$.

There are 9 references: 7 Soviet and 2 US.

SUBMITTED: May 16, 1960

Card 6/6

GADZHIYEV, M.Yu. (Moskva)

Application of the theory of games to some problems of automatic control. Part 1. Avtom.i telem. 23 no.8:1023-1036 Ag '62. (MIRA 15:7)

(Automatic control) (Games, Theory of)

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GADZHIYEV, M YU.

PHASE I BOOK EXPLOITATION SOV/6012

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Avtomaticheskoye regulirovaniye i upravleniye (Automatic Regulation and Control) Moscow, Izd-vo AN SSSR, 1962. 526 p. Errata slip inserted. 9000 copies printed.

Resp. Ed.: Ya. Z. Tsypkin, Professor, Doctor of Technical Sciences; Ed. of Publishing House: Ye. M. Grigor'yev; Tech. Ed.: I. N. Dorokhina.

PURPOSE: This book is intended for scientific research workers and engineers concerned with automation.

COVERAGE: The book is a collection of articles consisting of papers delivered at the 7th Conference of Junior Scientists of the Institute of Automation and Telemechanics, Academy of Sciences USSR, held in March 1960. A wide range of scientific and technical questions relating to automatic regulation and control is covered.

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The articles are organized in seven sections, including automatic control systems, automatic process control, computing and decision-making devices, automation components and devices, statistical methods in automation, theory of relay circuits and finite automatic systems, and automated electric drives. No personalities are mentioned. References are given at the end of each article.

TABLE OF CONTENTS:

PART I. AUTOMATIC CONTROL SYSTEMS

S/274/63/000/002/003/019
A055/A126

AUTHOR: Gadzhiyev, M.Yu.

TITLE: Study of the optimum retuning of the carrier frequencies of signal and interference with the aid of the games theory

PERIODICAL: Referativnyy zhurnal, Radiotekhnika i Elektrosvyaz', no. 2, 1963, 7 - 8, abstract 2A27 (In collection "Avtomat. regulirovaniye i upr.", M., AN SSSR, 1962, 370 - 374)

TEXT: The following problem is solved. The carrier frequencies f_2 of the signal containing useful informations and f_1 of the interference hindering the discrimination of the useful signal in a receiver can vary independently within determined limits (W_1, W_2); $\Delta W = W_2 - W_1$. The interference tends to reduce the difference between its carried frequency and the carrier frequency of the useful signal, whereas it is necessary to increase this difference for a better discrimination of the useful signal. The arising problem as to the determination of the best way for changing the carrier frequencies of both interference and useful signal is solved by the method of the games theory. Let us assume

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Study of the optimum retuning of the ....

that $S(|f| - f_1)$ is the spectral density of the interference; $G(|f| - f_2)$ is the frequency response of the receiver. The following formula is adopted as expressing the gain function:

$$\Phi(|f_1 - f_2|) = \int_{-\infty}^{\infty} S(f)\{G[f + (f_2 - f_1)] + G[f + (f_1 - f_2)]\}\,df;$$

this formula coincides with the formula for the r.m.s. voltage at the receiver output when noise only is applied to its input. Let us assume also that $\xi_0(f_1)$ is the optimum mixed strategy of the interference; $\eta_0(f_2)$ is the optimum mixed strategy of the signal. For the adopted gain function

$$\Phi(|f_1 - f_2|) = Ke^{-\gamma|f_1 - f_2|}$$

it is possible to solve the "Wiener-Hopf" (Viner-Khopf) equations, well-known in the games theory, and determining the optimum mixed strategies and the price of the game γ. The following result is obtained:

Card 2/4

Study of the optimum retuning of the ....

$$\xi_0(f_1) = \frac{1}{2 + \gamma (W_2 - W_1)} \{\gamma + [\delta(f_1 - W_1) + \delta(f_1 - W_2)]\}, \quad (1)$$

where δ is the Dirac delta-function. The optimum mixed strategies have the aspect of a distribution function. To the probability density of (1) corresponds the distribution function

$$F(f_1) = c_1 1(f_1 - W_1) + c_2 (f_1 - W_2) + c_1 1(f_1 - W_2), \quad (2)$$

where 1 is the unitary function;

$$2c_1 = \frac{2}{2 + \gamma (W_2 - W_1)}, \quad c_2 (W_2 - W_1) = \frac{\gamma (W_2 - W_1)}{2 + \gamma (W_2 - W_1)}. \quad (3)$$

Since parameter γ determines the width of the gain function, it follows from (3) that, when γ decreases, the probability fraction corresponding to the jumps of the distribution function (2) decreases, whereas the value of the regular distribution of the carrier frequencies over the range increases. When the product $\gamma \Delta W$ increases, the efficiency of the hindering action of the interference decreases, since the price of the game decreases. In the majority of

Card 3/4

Study of the optimum retuning of the ...

cases, the useful signal must be radiated on frequencies W_1 and W_2. There are 3 references.

V.T.

[Abstracter's note: Complete translation]

Card 4/4

GADZHIYEV, M. Yu. (Moskva)

Application of the theory of games to some automatic control problems. Part 2. Avtom. i telem. 23 no.9:1144-1153 S '62.

(Automatic control) (Games, Theory of)

USSR/Human and Animal Physiology. Blood T-4

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65130

Author : Gadzhiyev N.A.
Inst : The Azerbaydzhan Medical Institute
Title : The Change in Blood Coagulability in Alpinists in Mountainous Areas (Preliminary Report).

Orig Pub : Sb. tr. Azerb. med. in-ta, 1956, Vyp. 2, 151-155

Abstract : The blood clotting function of 32 alpinists was studied (by the Mas-Margo method) 1-2 days after being in an alpinist camp, during climbs and marches at altitudes of 3800 meters and higher, and after climbs. At elevations of 400 meters and above all the participants in the ascent experienced O_2 insufficiency, and from 4200 meters on up epistaxis was observed in some of them. At elevations of 3500-4500 meters the clotting time of the majority of participants was prolonged by 3-5 minutes. The lowering of the partial pressure of O_2 was the principal cause of the prolonged clotting time. A mountain climate also influences coagulability to a certain extent.--A.D. Belodorodova

Card : 1/1

GADZHIYEV, N.A., Cand Med Sci -- (diss) "Change in the hemodynamic indicators, coagulating capacity, and morphology of peripheral blood, and the ~~and~~ Vitamin C balance in mountain climbers in the high mountain regions of the Caucasus." Baku, 1958, 23 pp (Azerbaydzhan State Med Inst im N. Narimanov) 250 copies (KL, 50-58, 128)

TAIROV, A.P., dots.; GADZHIYEV, N.A., ordinator.

Unusual case of chronic transverse volvulus of the stomach in the presence of a third anomalous omentum and relaxation of the left diaphragmatic cupola. Khirurgiia 34 no.12:80-83 D '58. (MIRA 12:1)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. kafedry - prof. F. A. Efendiyev) pediatricheskogo i sanitarnogo fakul'tetov Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta.

(STOMACH, dis.
torsion in omental abnorm & diaphragmatic relaxation (Rus))
(OMENTUM, abnorm.
with gastric torsion & diaphragmatic relaxation (Rus))
(DIAPHRAGM, abnorm.
relaxation with gastric torsion & omental abnorm. (Rus))

DZHALILOV, N.M.; ASKEROV, K.A.; GADZHIYEV, N.A.; GANICHKIN, V.V.; KAGRAMANOV, I.M.

Wear of tricone bits in turbodrilling in the Zyrya area. Azerb. neft. khoz. 42 no.1:18-20 Ja '63. (MIRA 16:10)

(Apsheron Peninsula—Oil well drilling—Equipment and supplies)
(Mechanical wear)

[redacted], N.A.; [redacted], N.N.; [redacted], A. .

Wearing out triple-roller bits. Burovik no.5:3-5 '54. (MIRA 18:5)

1. Azneftburneft'.

ALIYEV, Sh.N.; GADZHIYEV, N.A.; MELKUMOV, R.M.

Effect of the curvature of the hole on the capacity of a deep well pump. Mash. i neft. obor. no.12:7-9 '64.

(MIRA 18:1)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche nefti.

ALIYEV, N.I.; GADZHIYEV, N.G.; VEDENEYEV, L.S.

Small lift of simplified design. Azerb. nefti. khoz. 40 no. 3:32-34 Mr '61. (MIRA 14:5)

(Oil wells--Gas lift)

ALIKHANOV, F.N.; ARUSHANOV, M.A.; AKHUNDOV, V.Yu.; ALIZADE, M.A.; AZIZBEKOV, Sh.A.; BAGIROV, M.A.; VEZIROV, S.A.; VOLOBUYEV, V.R.; BEKILOV, F.M.; GADZHIYEV, N.M.; GUSEYNOV, D.M.; GUSEYNOV, I.A.; DADASHEV, K.K.; DADASHZADE, M.A.; DALIN, M.A.; ISKENDEROV, M.A.; KAZIYEV, M.A.; KARAYEV, A.I.; KASHKAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.; LEMBERANSKIY, A.D.; MAMEDOV, G.K.; MEKHTIYEV, M.R.; MIRZOYEV, S.A.; NAGIYEV, M.F.; NESRULLAYEV, N.I.; ORUDZHEV, A.K.; RADZHABOV, R.A.; RUDNEV, K.N.; SADYKHOV, R.N.; SEMENOV, N.N.; TOPCHIYEV, A.V.; TOPCHIBASHEV, M.A.; TAIROVA, T.A.; KHALILOV, Z.I.; EFENDIYEV, G.Kh.; SHUFYUROVA, Z.Z.

IUsif Geidarovich Mamedaliev; obituary. Dokl. AN Azerb. SSR 17 no.12:1123-1126 '61. (MIRA 15:2)
(Mamedaliev, Iusif Geidarovich, 1905-1961)

ALIKHANOV, E.N.; ARUSHANOV, N.A.; AKHUNDOV, V.Yu.: ALIZADE, M.A.; AZIZBEKOV, Sh.A.; BAGIROV, M.A.; VEZIROV, S.A.; VOLOBUYEV, V.R.; VEKILOV, F.M.; GADZHIYEV, N.M.; GUSEYNOV, D.M.; GUSEYNOV, I.A.; DADASHEV, K.K.; DADASHZADE, M.A.; DALIN, M.A.; ISKENDEROV, M.A.; KAZIYEV, M.A.; KARAYEV, A.I.; KASHKAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.; LEMBERANSKIY, A.D.; MAMEDOV, G.K.; MEKHTIYEV, M.R.; MIRZOYEV, S.A.; NAGIYEV, M.F.; NASRULLAYEV, N.I.; OGUDZHEV, A.K.; RADZHABOV, R.A.; RUDNEV, K.N.; SADYKHOV, R.N.; SEMENOV, N.N.; TOPCHIYEV, A.V.; TOPCHIBASHEV, M.A.; TAIROVA, T.A.; KHALILOV, Z.I.; EFENDIYEV, G.Kh.; SHUKYUROVA, Z.Z.

IUsif Geidarovich Mamedaliev. Azerb.khim.zhur. no.6:5-6 '61.
(MIRA 15:5)
(Mamedaliev, IUsif Geidarovich, 1905-1961)

GADZHIYEV, N.N.

Two cases of tuberculomas of the liver. Probl. tub. no.8: 102-104 '62. (MIRA 16:9)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - zasluzhennyy deyatel' nauki Dagestanskoy ASSR prof. R.P.Askerkhanov) Dagestanskogo meditsinskogo instituta.
(LIVER--TUBERCULOSIS)

GADZHIYEV, O. M., Cand Agric Sci (diss) -- "The effect of dense sowing of corn on the harvest and quality of fodder under irrigated conditions in the western part of Azerbaydzhan". Kirovabad, 1959. 17 pp (Min Agric Azerb SSR, Azerb Acad Agric Sci, Sci Res Inst of Agric), 150 copies (KL, No 10, 1960, 134)

GADZHIYEV, Orkhan Makhmud

[Companion cropping of corn] Gargydalynyn sykhlashdyrylmysh ekinleri. Baky, Azerneshr, 1964. 38 p. [In Azerbaijani] (MIRA 17:5)

GADZHIYEV, P.A.

Legacy of illustrations from the folk artist A. Azimzade. Dokl. AN Azerb. SSR 17 no. 2:165-167 '61. (MIRA 14:4)

1. Institut arkhitektury i iskusstva AN Azerbaydzhanskoy SSR. Predstavleno akademikom AN Azerbaydzhanskoy SSR M.A. Useynovym.
(Azimzade, Azim, 1880-1943)

GADZHIYEV, R.A.

Testing the general stability and strength of the bearing block of a large-block foundation of a man-made island. Azerb.neft. khoz. 40 no.12:50-52 D '61. (MIRA 15:8)
(Artificial islands)

GADZHIYEV, R.G., klinicheskiy ordinator.

Effect of streptomycin on Gonococci. Vest.ven.i derm. no.5:32-35 S-O '53. (MLRA 6:12)

1. Iz otdela gonorrei (zaveduyushchiy - professor I.M.Porudominskiy) i otdela mikrobiologii (zaveduyushchiy - professor N.M.Ovchinnikov) Tsentral'nogo kozhno-venerologicheskogo instituta (direktor - kandidat meditsinskikh nauk N.M.Turanov) Ministerstva zdravookhraneniya SSSR.
(Streptomycin) (Gonorrhea)

ARTEM'YEV, S.A.; GADZHIYEV, R.G.

Streptomycin in the treatment of gonorrhea in men. Sov.med. 20 no.7: 40-42 Jl '56. (MLRA 9:10)

1. Iz otdela gonorrei (zav. prof. I.M.Porudominskiy) TSentral'nogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. dotsent N.M.Turanov) Ministerstva zdravookhraneniya SSSR.

(GONORRHEA, ther.
streptomycin in males)
(STREPTOMYCIN, ther. use
gonorrhea in males)

GADZHIYEV, R. G.

Comparative concentrations of streptomycin in the blood, in freshly eliminated urine, and in the prostatic secretion of patients having gonorrheal infection. R. G. Gadzhiev. *Urologiya* 21, No. 1, 41-3(1956).—After the intramuscular injection of 0.25–0.50 g. of streptomycin its concn. in the urine and in the blood varies considerably. It attains its highest concn. 3 hrs. after injection, and 6 hrs. after his injection its concn. in freshly voided urine is still sufficiently high to be gonococcocidal. The level of streptomycin concn. in the prostatic secretion of patients having gonorrheal prostatitis following the intramuscular injection of 0.25–0.50 g. of the antibiotic differs with the type of pathologic process; it is highest in secretions of catarrhal prostatitis; in subacute and chronic parenchymatous prostatitis the level of streptomycin concn. in the prostatic secretion is at a lower level, most frequently not exceeding the normal level. Six to 12 hrs. following the intramuscular injection of 0.25–0.50 g. of the antibiotic its concn. in the prostatic secretion was higher than in the blood regardless of the condition of the gland, and considerably higher than that required for the exertion of gonococcocidal effects.

B. S. Levine

GADZHIYEV, R.G.

Biomycin treatment of gonorrhea in men. Vest.ven. i derm. 30 no.2: 50 Mr-Ap '56. (MLRA 9:7)

1. Iz Azerbaydzhanskogo kozhno-venerologicheskogo instituta.
(GONORRHEA) (AUREOMYCIN)

PORUDOMINSKIY, I.M.; ARTEM'YEV, S.A.; LUR'YE, S.S.; NYUNIKOVA, O.I.; GADZHIYEV, R.G.; DZHEBRAILBEKOV, A.D.

Bicillin-1 and bicillin-d in the therapy of gonorrhea. Vest.derm. i ven. 34 no.8:62-66 '60. (MIRA 13:11)

1. Iz TSentral'nogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - kand.med.nauk N.M. Turanov) Ministerstva zdravookhraneniya RSFSR i 2-y kafedry kozhnykh i venericheskikh bolezney (zav. - zasluzhennyy deyatel' nauki prof. B.A. Eyvazov) Azerbaydzhanskogo meditsinskogo instituta.
(GONORRHEA) (PENICILLIN)

GADZHIYEV, R.G.; DZHEBRAILBEKOV, A.D.

Bitsillin in the treatment of gonorrhea. Azerb. med. zhur. no. 1:37-42 Ja '61. (MIRA 14:2)
(PENICILLIN) (GONORRHEA)

GADZHIYEV, R.G. (Baku)

Comparative evaluation of the effect of naphthalan and its individual fractions on the permeability of the skin under experimental conditions. Vest.derm. i ven. no.9:77-79'62.
(MIRA 16:7)

1. Iz 2-oy kafedry kozhnykh i venericheskikh bolezney (zav. prof. B.A.Eyvazov) Azerbaydzhanskogo meditsinskogo instituta imeni N.Narimanova.
(SKIN—PERMEABILITY) (NAPHTHALAN)

GADZHIYEV, R.G.

Study of the capillary blood circulation of the skin in some dermatoses by the method of radioactive phosphorus. Dokl. AN Azerb. SSR 19 no.7:83-88 '63.

(MIRA 17:12)

1. Azerbaydzhanskiy meditsinskiy institut im. N. Narimanova.

GADZHIYEV, R.G.

Basis for treating certain dermatoses with radioactive phosphorus (P 32). Vest. derm. i ven. 37 no.5:35-40 My '63. (MIRA 17:5)

1. Vtoraya kafedra kozhnykh i venericheskikh bolezney (zav. - prof. B.A. Kyvazov) Azerbaydzhanskogo meditsinskogo instituta imeni N. Narimanova i otdeleniye patologicheskoy morfologii (zav.- prof. L.V. Faynshteyn) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii.

Gadzhiyev, R.G., kand.med.nauk

Late results of radioactive phosphorus therapy of eczema and neurodermatitis. Vest. derm. i ven. 37 no.9:39-43 S '63. (MIRA 17:6)

1. 2-ya kafedra kozhnykh i venericheskikh bolezney (zav. - zasluzhennyy deyatel' nauki prof. B.A. Kyvazov) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta imeni N. Narimanova.

GADZHIYEV, R.G., kand.med.nauk

Study of the physiological regeneration of the epidermis and its appendages by the method of histoautoradiography. Vest. derm. i ven. 38 no.9:25-30 S '64. (MIRA 18:4)

1. Kafedra kozhnykh i venericheskikh bolezney (zav. - prof. B.A. Eyvazov) Azerbaydzhanskogo meditsinskogo instituta imeni Narimanova i laboratoriya patologicheskoy anatomii (zav. - prof. L.V.Funsh'yn) TSentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya SSSR, Baku.

GADZHIYEV, R.G., kand. med. nauk

Late results of local irradiation by radicactive phosphorus in capillary angioma of the skin. Azerb. med. zhur. 41 no.2: 52-59 F '64 (MIRA 18:1)

1. Iz 2-y kafedry ozhnykh i venericheskikh bolezney Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta imeni N. Narimanova.

GADZHIYEV, R.M.

Density of sedimentary rocks of eastern Azerbaijan. Azerb. neft. khoz., 39 no.1:13-16 Ja '60. (MIRA 14:8)
(Azerbaijan--Rocks, Sedimentary)

S/035/62/000/008/079/090
A001/A101

AUTHORS: Gadzhiyev, R. M., Gasanov, I. S., Shapirovskiy, N. I.

TITLE: New techniques and methods of marine gravimetric investigations

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 25, abstract 8G218 ("Novosti neft. i gaz. tekhn. Geologiya", 1961, no. 4, 30 - 31)

TEXT: The method of marine gravimetric observations without anchoring the vessel is described. This method became possible as a result of time reduction necessary for measurements at the expense of eliminating interactions in electric circuits of the ДГПЕ (DGPYe) gravimeter; this was achieved by separate feeding the circuits of thermostat and reading device. When the ship moves from one observational point to the other, the gravimeter is not set on the deck, but is suspended to a crown beam mounted on the deck in the stern part of the ship. Lifting and sinking operations are conducted by one technician from the panel board. A small number of reference-knot points are established, fixed reliably by beacons on the sea. Drifting of gravimeter zero is taken into account by observations at the reference-knot points. The employment of the anchorless method of

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S/035/62/000/008/079/090
A001/A101

New techniques and methods of...

observations makes it possible to conduct measurements at great sea depths. During one working day, observations at 15 - 20 points can be performed with a rms error of one measurement equalling to ±0.3 mgal (at the density of network being 1 point per 9 km^2).

Yu. Yurov

[Abstracter's note: Complete translation]

Card 2/2

ISMAYLOV, K.A.; GADZHIYEV, R.M.

Subsurface structure of Apsheron oil- and gas-bearing province. Izv.AN Azerb.SSR.Ser.geol.-geog.nauk i nefti 17-29 '62. (MIRA 16:2)

(Apsheron Peninsula—Petroleum geology)
(Apsheron Peninsula—Gas, Natural—Geology)

SHAPIROVSKIY, Natan Il'ich; GADZHIYEV, R.M.; DZHAFAROV, Kh.D., red.; RASHEVSKAYA, T.A., red. izd-va; NASIROV, N., tekhn. red.

[Geophysical prospecting at sea]Morskaia geofizicheskaia razvedka. Baku, Azerbaidzhanskoe gos.izd-vo, 1962. 154 p. (MIRA 15:9)

(Caspian Sea--Prospecting--Geophysical methods)

ACCESSION NR: AR4008228 S/0169/63/000/011/D023/D023

SOURCE: RZh. Geofizika, Abs. 11D134

AUTHOR: Tereshko, D. L.; Gadzhiyev, R. M.; Gasanov, I. S.

TITLE: Marine gravimetric operations

CITED SOURCE: Sb. Geofiz. izuch. geol. stroyeniya neftegazonosn. obl. Azerbaydzhana, Baku, Azerb. gos. izd-vo, 1963, 58-64

TOPIC TAGS: gravimetry, marine gravimetry, marine gravimetry history, pendulum survey, Apsheron peninsula gravimetry, geophysical instrument, marine gravimetric survey

TRANSLATION: The authors describe the history of marine gravimetry, starting with the pendulum survey of 1930 of the route from Baku to the Kura River delta. Prior to 1954, this work was basically of an experimental character. Its aim was to test and master Soviet equipment and to develop techniques of marine surveying using this apparatus; at the same time, the goal was to have the aquatorial around the Apsheron Peninsula covered by an area survey with an average density of 1 point

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ACCESSION NR: AR4008228

per 10-12 km^2. A small bottom gravimeter began to be used in 1956. An anchorless observational technique has been in use since 1958. By the end of 1959, gravimetric surveys covered the entire aquatorial of the Baku Archipelago down to a depth of 100-200 m to the east and up to the national boundary on the south for an area of about 9 thousand km^2. The grid density is 1 point per 8-10 km^2 on the average; the mean square error per measurement is from $\pm$ 0.3 to $\pm$ 0.7 mgal. The latest surveys were used to construct a map of Bouguer anomalies with isolines over 2 mgal, constructed in conformance to the map of the adjacent land. Bottom gravimetry operations continued in 1960 in the southern part of the Apsheron Peninsula, between Makarov Bank and Neftyany*ye Kamni. In the future, the intention is to survey the entire Apsheron shelf, as well as to continue the survey to the south of the Apsheron Peninsula all the way to the Dagestan border. I. Yesakov.

DATE ACQ: 09Dec63 SUB CODE: AS ENCL: 00

Card 2/2

CADZHIYEV, R.M.; TSIMEL'ZON, I.O., red.

[Subsurface geology of Azerbaijan] Glubinnoe geologicheskoe stroenie Azerbaidzhana. Baku Azerbaidzhanskoe gos. izd-vo, 1965. 199 p. (MIRA 18:8)

L 25656-66 EWT(1) GM UR/
ACC NR: AM502 783 Monograph

26
B+1

Gadzhiyev, R. M.

Deep geological structure of Azerbaydzhan (Glubinnoye geologicheskoye stroyeniye Azerbaydzhana) Baku, Azerbaydzh. gos. izd-vo, 1965. 199 p. illus., biblio. 1500 copies printed.

TOPIC TAGS: geographic survey, geologic exploration, geomagnetic disturbances, geomorphology, gravitation field

PURPOSE AND COVERAGE: The book describes geological and geographical characteristics of the earth's crust in the Azerbaydzhan and Southern Caspian region. The description of the deep-seated geological structure includes an interpretation of regional anomalies of the gravitational and magnetic fields. The history of the geotectonic development of the Azerbaydzhan part of the Caucasian geosyncline is revised on the basis of new data. The book is intended for engineers, geologists, and geophysicists, also for scientific research workers and graduate students interested in the problems of geological interpretation of geophysical fields and the structure of the earth's crust in geosyncline zones, particularly, in Azerbaydzhan. There are 125 references, all Soviet.

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L 25656-66
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Ch. X. The relationship between the seismicity of the territory of the Azerbaydzhan SSR and the deep geological structure — 174

Conclusion. Gravity anomalies in Azerbaydzhan as a reflection of oscillatory movements of the earth's crust — 187

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SUB CODE: 08/ SUBM DATE: 08Mar65/ ORIG REF: 120/ OTH REF: 005

Card 3/3 dbla

L 1854-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AR5010780 UR/0274/65/000/003/B102/B103

621.396.002:621.315.61

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Sv. t., Abs. 3B652

AUTHOR: Gadzhiyev, R. V.

TITLE: Experience of the Baku Radio Manufacturing Plant in the production of components, radio equipment, and instruments from new polymer materials

CITED SOURCE: Sb. Polimern. i drevesn. materialy v mashinostroit., elektrotekh. i priborostroit. prom-sti AzerbSSR, Baku, 1964, 66-72

TOPIC TAGS: electronic component, plastic electronic component, polymer dielectric

TRANSLATION: The materials for radio components must have high insulation, high breakdown voltage, low tgδ, and high ε. Polymers satisfy the above requirements. The Baku Radio Plant has used K-21-22, K-15-2, K-17-2, K-15TsS-37, K-18-2 molding powders, Monolit-7, polyethylene, vinyl chloride, DTUP polystyrene, aminoplast, and phenolic plastic. The phenolic plastic components have high insulating properties,

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ACCESSION NR: AR5010780

good gloss surface, they are strong and easily machinable. This material is used for knobs, blocks, caps, washers, housings, shims, etc. The molding powders are pressed under the following conditions: temperature, 155—5C; pressure, 300—50 kg/cm ; pressing time, per 1 mm of thickness, about 1 min. Of particular importance are the electrical properties of polystyrene: its electric strength at 20C is 25—40 kv/mm, while in thin films it reaches 100 kv/mm; its dielectric constant within 50 cps — 1 Mc is almost invariable and lies within 2.5—2.8; its tg δ is very low, and lies within 0.00001—0.0006, being practically independent of frequency. These causes of quality defects in plastic components are indicated: deviation from the normal regime of pressing (underpressing, overheating, etc.), wrong shape of the mold or its wear, incorrect choice of plastic, and use of material that does not meet specifications. Typical defects are listed (bulging, underpress, warping, size rejects, cracks, dull surface, creases, and ripples).

SUB CODE: EC, MT ENCL: 00

Card 2/2 dg

GADZHIYEV, S.

AUTHOR: Gadzhiyev, S. 2-5-5/11

TITLE: From the History of the Local Organs of State Statistics in the First Years of Soviet Power (Iz istorii organizatsii mestnykh organov gosudarstvennoy statistiki v pervyye gody sovetskoy vlasti)

PERIODICAL: Vestnik Statistiki, 1957, # 5, p 52-60 (USSR)

ABSTRACT: The author refers to the very beginning of Soviet Statistics from October 1917 - February 1918. During this period the Soviets had to organize their statistical staff in guberniya, uyezd and volost' (administrative districts in pre-revolutionary Russia). As far as they found the personnel trustworthy, they took over partly the still existing tsarist statistical institutions and tried besides to build up as fast as possible their own communist statistical institutions.

In Moscow, Samara, Petrograd, Yaroslavl', Nizhniy Novgorod, Kazan', Saratov and Perm' courses were organized to educate new Soviet statisticians.

The first development period of Soviet statistics was terminated on 17th July 1923, when the TsIK SSSR brought forward a decision to establish a Central Statistic Administration attached to the Soviet Narodnykh Komissarov USSR.

Card 1/2

2-5-5/11

From the History of the Local Organs of State Statistics in the First Years of Soviet Power

There are 15 Russian references.

AVAILABLE: Library of Congress

Card 2/2

21(8) SOV/56-35-5-35/56

AUTHORS: Mukhtarov, A. I., Gadzhiyev, S. A.

TITLE: The Radiative Disintegration of the $\pi^{\pm}$-Meson and the Consideration of Non-Conservation of Parity (Radiatsionnyy raspad $\pi^{\pm}$-mezona i uchet nesokhraneniya chetnosti)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1283-1285 (USSR)

ABSTRACT: The longitudinal polarization of particles is a consequence of the non-conservation of parity in the presence of weak interactions. The investigation of radiation decay $\pi^{\pm} \rightarrow \mu^{\pm} + \nu + \gamma$ shows that parity can also not be conserved in mixed interactions. For this purpose, the decay equation for the four-component theory of the neutrino is written down. The longitudinal polarization of the muon and the neutrino are accounted for by introducing a projecting operator of the form $\vec{\sigma}\,\hat{\vec{p}}/p$. The eigenvalues of this parameter(s_{μ} and s_{ν}) then describe the longitudinal polarization of the muon and the neutrino. Next, an expression for the decay probability

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The Radiative Disintegration of the π^{+}-Meson and the Consideration of Non-Conservation of Parity

of a resting pion will be derived. Three terms of this expression are due to the non-conservation of parity, i.e. to longitudinal polarization of the muon, neutrino and γ-quantum. In order to facilitate analysis of the expression for the disintegration probability, the pulse of the muon is assumed as being very small. The pulses of the γ-quantum are assumed as being anti-parallel. The analysis of the decay probability leads to the following results: a) If the spin of the muon is contrary to the direction of motion of the γ-quantum, the decay probability differs from "0" only if during decay a neutrino is emitted and if the emitted γ-quantum is polarized circularly to the right; b) If the spin of the muon points in the direction of motion of the γ-quantum, a decay of the pion is feasible under emission of one antineutrino and one γ-quantum with left circular polarization. If the pion decays under emission of a neutrino, its spin must then form an angle of 180° with the direction of the γ-quantum (if the pulse of the muon is small). In case of disintegration of the antineutrino this angle must be almost "0". There are 2 references, 1 of which is Soviet.

SOV/56-35-5-35/56

The Radiative Disintegration of the $\pi^{\pm}$-Meson and the Consideration of Non-Conservation of Parity

ASSOCIATION: Azerbaydzhanskiy gosudarstvennyy universitet
(Azerbaydzhan State University)

SUBMITTED: June 13, 1958

Card 3/3

MUKHTAROV, A.I.; GADZHIYEV, S.A.

Radiative decay of π^+-mesons and calculation of the nonconservation of parity. Zhur. eksp. i teor. fiz. 35 no.5:1283-1285 N '58. (MIRA 12:3)

1.Azerbaydzhanskiy gosudarstvennyy universitet.
(Mesons--Decay)

21(8)

AUTHORS: Kerimov, B. K., Mukhtarov, A. I., Gadzhiyev, S. A.

SOV/56-37-2-47/56

TITLE: Polarization Effects in the Decay $\pi^0 \to e^- + e^+ + \gamma$

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 575-576 (USSR)

ABSTRACT: Recently (Refs 1,2) cases of a charge exchange scattering of negative pions on hydrogen ($\pi^- + p \to \pi^0 + n$) with a subsequent decay of the neutral pion according to the Dalitts scheme into an electron-positron pair and into a γ-quantum were recorded. In the present paper the results of a calculation of the decay of the neutral pion according to the above scheme taking into account the spin states (of the longitudinal polarizations) of the electron-positron pair produced and of the γ-quantum are presented. The Hamiltonian of the direct interaction for the process mentioned above takes the form $H_{int} = eg\psi_{\pi^0}\left\{\psi^+_{e^-} O_i D^{-1}(\vec{\alpha}\vec{A}^+)\psi_{e^+} + (\psi^+_{e^-} \vec{\alpha}\vec{A}^+ D^{-1})O_i\psi_{e^+}\right\}$. In this equation ψ_{π^0}, $\psi^+_{e^-}$, ψ_{e^+} and $\vec{A}^+$ denote the wave functions of the π^0 meson, the electron, positron, and of the

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γ-quantum. D represents the Dirac operator, $\vec{\alpha} = \rho\vec{\sigma}$ the Dirac matrices, $O_i = \rho_2$ holding, if the π^0 meson is pseudoscalar, and $O_i = \rho_3$, if it is a scalar particle. In the sequel an expression for the probability of the decay in question $\pi^0 \rightarrow e^- + e^+ + \gamma$ is derived

$$dW(s_-,s_+,l,\theta) = \frac{e^2 g^2}{\hbar^2 c^4 (2\pi)^3} \frac{k_+^2 d\Omega_+(dk_-)}{k_{o\pi} k_+ K_- (k_{o\pi} - K_-) + k_{o\pi} K_- k_- K_+ \cos\theta} \cdot$$

$$\cdot \{\Phi_1 + s_- s_+ \Phi_2 + l s_- \Phi_3 + l s_+ \Phi_4\}.$$

The rather lengthy expressions occurring in this equation for Φ_1, Φ_2, Φ_3, and Φ_4 are written down explicitly. The formula for $dW(s_-,s_+,l,\theta)$ gives the angular dependence and the energy dependence of the degree of longitudinal polarization and of the correlations between the polarizations (the terms $\sim s_- s_+, l s_-, l s_+$) in the decay $\pi^0 \rightarrow e^- + e^+ + \gamma$. This may be of use in the collection of data on the properties of the neutral pion. According to the

Polarization Effects in the Decay $\pi^0 \longrightarrow e^- + e^+ + \gamma$ SOV/56-37-2-47/56

formulas derived herein the decay probability in $\pi^0 \rightarrow e^- + e^+ + \gamma$ for the extreme relativistic decay electrons and positrons (if k_-, $k_+ \gg k_0$ and $\Phi_1 = \Phi_2$, $\Phi_3 = \Phi_4$ is true) differ from zero only if the electrons and the positrons of the pairs exhibit either a left or right polarization. The authors express their gratitude to A. A. Sokolov for the constant interest shown in this work. There are 5 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: May 16, 1959

Card 3/3

GADZHIYEV, S.A.; MUKHTAROV, A.I.

Internal bremsstrahlung of a μ^+-meson. Izv.vys.ucheb.zav.; fiz. no.3:195-107 '60. (MIRA 13:7)

1. Azerbaydzhanskiy gosuniversitet im. S.M. Kirova.
(Bremsstrahlung) (Mesons)

S/139/60/000/03/035/045
E032/E314

AUTHORS: Gadzhiyev, S.A. and Mukhtarov, A.I.

TITLE: On the Disintegration of the μ^{+} meson

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No 3, pp 195 - 197 (USSR)

ABSTRACT: The present paper is concerned with the process $\mu \rightarrow e + \nu + \bar{\nu} + \gamma$. It is well known that on the two-component theory $s_{\nu} = -1/2$ for the neutrino and $s_{\bar{\nu}} = +1$ for the antineutrino. However, on the 4-component theory both the neutrino and the antineutrino have $s = \pm 1$ ($s_{\nu,\bar{\nu}} = \pm 1$). It is shown that on the two-component theory the probability of the above mode of disintegration of the μ-meson is identically zero (Eq 5). The two-component theory does not allow the above process through the scalar, pseudo-scalar and tensor variants of the interaction. Thus, an experimental confirmation of the fact that this mode is forbidden would be an additional confirmation both of the two-component theory of the neutrino and

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E032/E314

On the Disintegration of the μ^{+}_{-} meson

and the universal interaction theory of Feynman and Gell-Mann (Ref 3). In the case of the VA variants of the interaction, the probability of disintegration is found to be proportional to $1 - s_{\nu} s_{\bar{\nu}}$ and is therefore finite on the two-component theory of the neutrino; the latter point will be investigated further in a future paper. Acknowledgments are made to Professor A.A. Sokolov and B.K. Kerimov for valuable advice and discussions.
There are 9 references, 4 of which are Soviet and 5 English.

ASSOCIATION: Azerbaydzhanskiy gosuniversitet imeni S.M. Kirova (Azerbaydzhan State University imeni S.M. Kirov)

SUBMITTED: May 21, 1959

VB

Card 2/2

MUKHTAROV, A.I.; EYLANBEKOV, R.G.; GADZHIYEV, S.A.

Radiative decay of the π^+-meson. Izv. vys. ucheb. zav.; fiz. n.6:142-146 '60. (MIRA 14:3)

1. Azerbaydzhanskiy gosuniversitet imeni S. M. Kirova.
(Mesons—Decay)

MUKHTAROV, A.I.; MILANBEKOV, R.G.; GADZHIYEV, S.A.

Radiation decay of a charge π-meson. Dokl.AN Azerb.SSR 16 no.10: 935-940 '60. (MIRA 14:1)

1. Institut fiziki AN AzerbSSR. Predstavleno Akademikom AN AzerbSSR Z.I. Khalilovym.

(Mesons--Decay)

GADZHIYEV, S.A.

Decay of $K_{e\mu 3}$-mesons. Izv. AN Azerb. SSR. Ser.fiz.-mat. i tekh. nauk no.4:73-78 '60. (MIRA 14:3)
(Mesons--Decay)

30400

S/058/61/000/009/007/050
A001/A101

24.6700

AUTHORS: Mukhtarov, A.I., Eilanbekov, R.G., Gadzhiyev, S.A.

TITLE: On the radiative decay of charged π-mesons

PERIODICAL: Referativnyy zhurnal, Fizika, no. 9, 1961, 37, abstract 9B126 ("Dokl. AN AzerbSSR", 1960, v. 16, no. 10, 935-940, Azerb. summary)

TEXT: The authors investigated angular and energy distributions at radiative decays $\pi \to \mu + \nu + \gamma$ and $\pi \to e + \nu + \gamma$ for the scalar and pseudoscalar variants of direct interaction with allowance for longitudinal polarization of the particles and anomalous magnetic moment of μ-meson (electron). It is shown that contribution in decay probability of the terms caused by the anomalous magnetic moments of the electron and μ-meson, amounts to $\approx 0.1\%$. In the non-relativistic approximation relative to the μ-meson the total probability of a radiative $\pi \to \mu$ decay does not depend on the longitudinal polarization of the μ-meson; in the case of a radiative $\pi \to e$ decay, high-energy electrons must be polarized along their momenta and positrons - in the opposite sense. The authors present the graphs of energy spectrum of electrons and angular distribu-

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30400

S/058/61/000/009/007/050
A001/A101

On the radiative decay of charged π-mesons

tion of decay photons. They note that if in the formulae derived by them summing is carried out by polarization states of the electron (μ-meson) and photon and anomalous magnetic moment is neglected, the result of Vaks and Ioffe (RZhFiz, 1959, no. 7, 14829) is obtained.

B. Kerimov

[Abstracter's note: Complete translation]

Card 2/2

GADZHIYEV, S. A., CAND PHYS-MATH SCI, "POLARIZATION EFFECTS IN THE DECAY OF μ^- AND K- MESONS." BAKU, PUBLISHING HOUSE OF ACAD SCI AZSSR, 1961. (AZERBAYDZHAN STATE UNIV IMENI S. M. KIROV. AZERBAYDZHAN STATE PED INST IMENI V. I. LENIN. INST OF PHYS OF ACAD SCI AZSSR). (KL-DV, 11-61, 208).

33659
S/058/61/000/012/012/083
A058/A101

24.6610

AUTHOR: Gadzhiyev, S.A.

TITLE: Concerning $K_{e\mu 3}$ decay

PERIODICAL: Referativnyy zhurnal. Fizika, no. 12, 1961, 43, abstract 12A507 (Izv. AN AzerbSSR. Ser. fiz.-matem. i tekhn. n., 1960, no. 4, 73-78, Azerb. summary)

TEXT: There is derived a general expression for the probability of $K_{\mu 3}$ and K_{e3} decay taking into account longitudinal polarization of the muon and electron for the V + A and S + P variants of weak interaction. The energy spectra of the muon, electron and neutrino are also given. The degree of longitudinal polarization of the muon and electron is calculated as a function of muon and pion energy. A full vector variant taking into account Ulenbek-Konopinskiy interaction is then examined. The general probability expression, the energy spectrum and the degree of longitudinal polarization of the muon are expressed through angular and spin correlations between the muon and the neutrino. It is demonstrated that muons ejected at a 0° and 180° angle relative to the direction of emergence of the neutrino are polarized longitudinally almost completely.

[Abstracter's note: Complete translation]

B. Kerimov

Card 1/1

S/056/62/043/004/022/061
B102/B180

AUTHORS: Gadzhiyev, S. A., Mukhtarov, A. I.

TITLE: Polarization effects in radiative decay of pions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1275 - 1280

TEXT: The radiative decay of charged pions according to the mode $\pi \to e(\mu) + \nu + \gamma$ is investigated for the V±A variants of direct weak interaction, taking account of the longitudinal spin polarization of the fermions and γ-quanta produced. The pion decay graph shown in Fig. 1 a has already been investigated by the authors (e. g. ZhETF, 35, 1203, 1958) and it has been shown that a and b do not interfer for $m_{oe} \to 0$ (ZhETF, 35, 221, 1958). Therefore only b is here considered and the results compared with those for a. For graph b the pion decay probability

$$dW = \frac{e^2 a^2 g_\lambda^2 \varkappa k_{0n}}{(2\pi)^5 \hbar^3 c} (d^3\varkappa)(d^3k)(s_* - l\lambda)^2 \{1 - \beta\cos\theta\cos\theta_1 - \quad (3) \text{ is}$$
$$- ss_*(\beta - \cos\theta\cos\theta_1) + ls_*(\cos\theta_1 - \cos\theta) +$$
$$+ ls(\cos\theta - \beta\cos\theta_1)\}\delta(k_{0n} - K - k_* - \varkappa),$$

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Polarization effects ...

obtained; s and s_ν characterize the longitudinal polarization of the electron and neutrino spins, l=1 denotes right-hand and l=-1 left-hand circular polarization; $k_{0\pi}$ is the pion rest mass, $c\hbar k$, $(c\hbar\varkappa)$ and $\hbar\vec{k}$, $(\hbar\vec{\varkappa})$ are fermion (photon) energy and momentum, a and b are pion structural constants. After integrating with respect to photon and electron energies,

$$dW(a, l, s) = \frac{Ak_{0\pi}^3 d\Omega}{2^{10}a^6}(1 - ss_\nu)(s_\nu - l\lambda)^2\left\{\alpha\left(45 - \frac{181}{2}\alpha + 48\alpha^2 - \frac{87}{12}\alpha^3\right) + \right.$$
$$+ (1-\alpha)(45 - 63\alpha + 24\alpha^2 - 2\alpha^3)\ln(1-\alpha) + \qquad (4)$$
$$\left. + ls\left[\alpha\left(25 - \frac{69}{2}\alpha + \frac{46}{3}\alpha^2 - \frac{7}{12}\alpha^3\right) + (1-\alpha)(25 - 27\alpha + 6\alpha^2)\ln(1-\right.\right.$$

and summing over the electron and photon spin states

$$d\overline{W}(\alpha) = \frac{Ak_{0\pi}^3 d\Omega}{2^8 a^6}\left\{(1+\lambda^2)\left[\alpha\left(45 - \frac{181}{2}\alpha + 48\alpha^2 - \frac{87}{12}\alpha^3\right) + \right.\right.$$
$$\left. + (1-\alpha)(45 - 63\alpha + 24\alpha^2 - 2\alpha^3)\ln(1-\alpha)\right] + \qquad (4')$$
$$\left. + 2\lambda\left[\alpha\left(25 - \frac{69}{2}\alpha + \frac{46}{3}\alpha^2 - \frac{7}{12}\alpha^3\right) + (1-\alpha)(25 - 27\alpha + 6\alpha^2)\ln(1-\alpha)\right]\right\}.$$

$d\Omega = \sin\theta d\theta d\varphi$, $a = \sin^2(\theta/2)$, $A = (eag_A k_{0\pi}/\pi\hbar c)^2$.

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is obtained, which holds for any λ. For pion decay according to graph a, the photon (electron) angular distribution is

$$dW_l(a, l, s) = \frac{A_l k_{0n} d\Omega}{2^3 a^3}(1 + ss_v)\left\{a + (1-a)\ln(1-a) + \right.$$
$$\left. + 2a^2(1-a)\left(\ln\frac{1}{1-y_{max}} - 1\right) + ls\left[a(1-2a) + (1-a)\ln(1-a)\right]\right\}. \quad (5).$$

From (4) and (5) it follows that for all weak interactions according to b, electrons and positrons are polarized in longitudinal opposite directions. For graph a in weak V, A interaction, the electron spin is parallel and the positron spin antiparallel to the momentum. With graph b and $\lambda = 1$ the photons from π^+ and K^- decay can be polarized only parallel (π^+) or antiparallel (K^-) to the direction of motion. For $\lambda = -1$ the inverse holds, and for $\lambda \neq 1$ the photons are circularly polarized. These selection rules are verified by examining the energy spectrum of electrons (positrons) and the angular distribution of photons (electrons). Only these spectra (and not, e. g., the photon energy spectrum and the $e^{\pm}$ polarization signs) yield information about the predominance of V-A or V+A variants: In V+A interaction, the photons from π^- decay are emitted at angles around $\theta = \pi$, in V-A interaction around $\theta = 0$. There are 3 figures.

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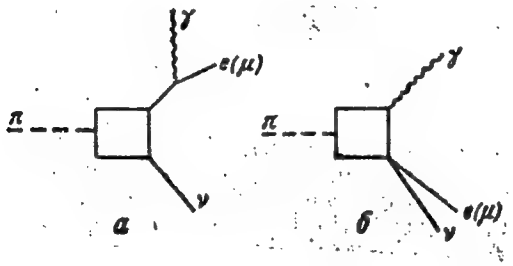
Polarization effects ...

S/056/62/043/004/022/061
B102/B180

ASSOCIATION: Azerbaydzhanskiy gosudarstvennyy universitet (Azerbaydzhan State University)

SUBMITTED: November 23, 1961 (initially)
May 28, 1962 (after revision)

Fig. 1.



Card 4/4

S/058/63/000/001/041/120
A062/A101

AUTHORS: Gadzhiyev, S. A., Atakishiyev, N. M.

TITLE: Electron polarization in $\pi^{\pm} \to \pi^{0} + e^{\pm} + \nu$ decay

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 3*, abstract 1B243 ("Uch. zap. Azerb. un-t. Ser. fiz.-matem. i khim. n.", 1961, no. 3, 81 - 85)

TEXT: The longitudinal polarization of decay electrons is calculated in the $\pi^{\pm} \to \pi^{0} + e^{\pm} + \nu$ decay for the case of V-A interaction; corresponding formulae and diagrams are given. The polarization degree P_e strongly depends on the energy at angles θ between electron-neutrino momenta in the range 90 - 175°; for $0° \leq \theta \leq 45°$ and $\theta \approx 180°$, P_e is approximately equal to ± 1, respectively, independently of the energy. Also expressions and curves for the electron energy spectrum are obtained. The authors conclude that the decay takes place mainly with an emission of positrons (electrons) with a right-hand (left-hand) polarization. The dependence P_e on the electron energy x, as found by the authors, gives evidence of the increase in the fraction of longitudinally polarized electrons with the increase of x.
[Abstracter's note: Complete translation]

Card 1/1

GADZHIYEV, S.A.; AVANESOVA, A.M.

Viscosity meter for determining the structural-mechanical indices of clay muds at high temperature. Burenie no.5:12-15 '64. (MIRA 18:5)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche nefti.

GADZHIYEV, S.A.; VORONOV, A.A.; SAZONOV, A.M.

Atrial septal defects; diagnosis and surgical treatment. Khirurgiia no.10:48-53 '64. (MIRA 18:8)

1. Kafedra grudnoy khirurgii i anesteziologii (zav. - prof. S.A. Gadzhiyev), Leningrad.

GADZHIYEV, S.A., prof. (Leningrad, M-70, ul. Frunze, d.L., kv.5);
VANEVSKIY, V.L.; DOGEL', L.V.; TOLSTOV, G.V.

Immediate and late results of surgical treatment of myasthenia.
Grud. khir. 6 no.6:80-86 N-D '64.

(MIRA 18:7)

1. Kafedra grudnoy khirurgii i anesteziologii (zav. - prof.
S.A. Gadzhiyev) i kafedra nervnykh bolezney (zav. - prof. V.V.
Semenova-Tyan'shanskaya) Leningradskogo instituta usovershenst-
vovaniya vrachey imeni S.M. Kirova.

GADZHIYEV, S.A., prof.; VASIL'YEV, V.N.

Esophageal diverticula and their surgical treatment. Vest. khir. 93 no.8:41-46 Ag '64. (MIRA 18:7)

1. Iz kafedry grudnoy khirurgii i anesteziologii (zav. - prof. S.A.Gadzhiyev) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni Kirova.

ABRAMOV, Sh.I., prof.; BAIROV, G.A., prof.; BLINOV, N.I., prof.; GADZHIYEV, S.A., prof.; GODUNOV, S.F., prof.; ZAVYALOV, G.A., prof.; DEMIN, V.N., prof.; ZVORYKIN, I.A., prof.; KAPITSA, L.M., kand. med. nauk; MOKROVSKAYA, S.P., kand. med. nauk; POSTNIKOV, B.N., prof.; PORKSHEYAN, O.Sh., prof.; SIDORENKO, L.N., kand. med. nauk; TAL'MAN, E.B., prof.; FEDOROVA, A.D., kand. med. nauk; FILATOV, A.N., prof.; KHROMOV, B.M., prof.; SARKISOV, M.A., red.

[Errors, hazards and complications in surgery] Oshibki, opasnosti i oslozhneniia v khirurgii. Leningrad, Meditsina, 1965. 563 p. (MIRA 18:7)

GADZHIYEV, S.A.; VORONOV, A.A.; VAS'KIYEV, V.N.

Artificial blood circulation in surgery on the open heart.
Azerb. med. zhur. 41 no. 10:9-15 O '64 (MIRA 19:1)

1. Iz kafedry grudnoy khirurgii (zav. - prof. S.A. Gadzhiyev) Leningradskogo Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey imeni Kirova.

GADZHIYEV, S. A.

"Method of Introducing the Catheter into the Trachea," Klin. Med., 30, No.3, 1952

GADZHIYEV, S.A., kandidat meditsinskikh nauk.

Lobus azygos and its diagnostic significance. Vest.khir. 73 no.6: 36-40 N-D '53. (MLRA 6:12)

1. Iz 2-y fakul'tetskoy khirurgicheskoy kliniki (nachal'nik - professor P.A.Kupriyanov) Voyenno-meditsinskoy akademii im. S.M.Kirova.
(Lungs--Abnormities and deformities)

GADZHIYEV, S.A.

GRIGOR'YEV, M.S.; LIBOV, S.L.; ANICHKOV, M.N.; GADZHIYEV, S.A.

On the occasion of the 60th birthday of Petr Andreevich Kuprianov.
Vest.khir. 73 no.6:67-69 N-D '53. (MLRA 6:12)
(Kuprianov, Petr Andreevich, 1893-)

GADZHIYEV, S.A., kandidat meditsinskikh nauk.

Impaired passage through the esophagus caused by chronic mediastinitis. Khirurgiia no.10:75-77 O '55. (MLRA 9:2)

1. Iz 2-y fakul'tetskoy khirurgicheskoy kliniki (nach. deystvitel'nyy chlen AMN SSSR prof. P.A. Kupriyanov) Voyenno-meditsinskoy akademii imeni S.M. Kirova.

(ESOPHAGUS, dis.
impaired passability caused by mediastinitis, clin. aspects & prev.)
(MEDIASTINITIS, compl.
impaired passability of esophagus, clin. aspects & prev.)

Gadzhiyev, S. A.

MISHURA, V.I., podpolkovnik meditsinskoy sluzhby; GADZHIYEV, S.A., kandidat meditsinskikh nau, mayor meditsinskoy sluzhby; KUTUSHEV, F.Kh., kandidat meditsinskikh nauk

Some problems in heart surgery. Voen.-med.zhur. no.10:10-16 O '56.
(HEART--SURGERY) (MLRA 10:3)

KUPRIYANOV, P.A., professor; GADZHIYEV, S.A., kandidat meditsinskikh nauk (Leningrad)

Some problems in surgery for mitral stenosis. Khirurgiia 32 no.4: 9-17 Ap '56. (MLRA 9:8)

(MITRAL STENOSIS, surgery, (Rus))

GADZHIYEV, S.A., kandidat meditsinskikh nauk (Leningrad, V.O., 1-ya liniya, d.18, kv. 32); MISHURA, V.I.

Diagnosis and treatment of Lutembacher's syndrome [with summary in English, p.157] Vest.khir. 77 no.7:15-23 Jl '56. (MLRA 9:10)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach. - prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(CARDIOVASCULAR DEFECTS, CONGENITAL, diag. & surg.)

EXCERPTA MEDICA Sec.9 Vol.11/4 Surgery April 57

GADZHIYEV, S.A.

1902. GADSCHIEV S.A. and MISHURA V.I. Surg. Clin., Milit. Med. Acad., Leningrad. *Diagnosis and treatment of the Lutembacher syndrome (Russian text) VESTN. KHIR. 1956, 7 (15-23) Illus. 4

The interatrial defect can present itself as an ostium primum or, more often, Botal's foramen ostium secundum. Data were given on 4 patients with Lutembacher syndrome. In the investigation all available diagnostic methods were employed - angiocardiography, phonocardiography, electrocardiography, vectorcardioscopy, etc. In 3 patients the defect manifested itself in puberty, in one patient at the age of 26 during her first pregnancy. The first 3 patients were often ill in childhood and their physical development was retarded; a certain dwarfing was apparent although there was no serious interference with work capacity. The clinical picture was characterized by dyspnoea, tachycardia and acrocyanosis. A study of the respiration established the fact that with a Lutembacher syndrome the co-efficient of oxygen consumption during exercise increases corresponding with an increase of the respiratory minute volume, while, with a combined mitral defect with a predominance of stenosis, it falls with a considerable increase in the respiratory minute volume. One female patient was operated on and the defect in the interatrial wall was easily penetrated by the surgeon's finger; the left venous aperture constricted up to 1.5 cm. in length, was enlarged up to 4 cm. after separation of the commissures. The condition of the patient was good one year after intervention. References 23. Gadshiev - Leningrad.

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stal EXCERPTA MEDICA Sec 9/Vol 13/5 SURGERY May 59 the
VIII, 9)

2571. EXPERIENCE IN SURGICAL TREATMENT OF MITRAL STENOSIS (Russian text) - Gadzhiev S. A. - Postgrad. Surg. Clin., Milit. Med. Acad., Leningrad - NOV. KHIR. ARKH. 1957, 5 (71-79) Tables 2 Illus. 1
Correlation of past history, complaints, and physical, radiological and ECG examination is particularly important in the diagnosis. Difficulties arising in recognition of a mitral heart lesion, especially with respect to determining the extent

of stenosis of the mitral orifice, are overcome by careful study of these data. Cardiac catheterization permits detection of organic changes in the pulmonary vessels but indications for this examination are limited in view of the risk of embolism and pulmonary infarction; angiocardiography is also subject to limited indications. Up to December 1956, 120 operations for dilatation of the mitral orifice were performed. In addition, isolated incompetence of the valve was found in 2 patients at operation. Pure stenosis was found in 59 cases. Breakdown of patients in accordance with severity of illness was as follows (using the classification recognizing 5 stages of the disease): second stage 4.2%, third stage 66.7%, third-fourth stage 8.3%, fourth stage 20.8%. In 75% of the patients the cusps, chordae tendineae and papillary muscles preserved their elasticity and in this group the most favourable results were noted following operation. In 25% of cases these elements of the valve apparatus were deformed and devoid of elasticity. Calcification of the valve was found in 20.8%. The operative intervention always included examination of the sub-valvular apparatus. When sub-valvular stenosis was found it was dealt with by finger; a commissurotome was used once. The instrument was used for section of commissures in 15% of cases, the remaining operations being performed by finger only. In cases of narrow auricle or in its absence, the finger was introduced through the wall of the left atrium. Intracardiac thrombosis is almost impossible to recognize before operation. Postoperative mortality was 6.6%. In one group of patients (55) no deaths occurred. Long-term results have been studied in 88 patients over periods of from 6 months to 2.5 yr. Good and excellent results were observed in 70 cases (79.5%).

Yarushevich - Leningrad (S)

GADZHIYEV, S.A., kandidat meditsinskikh nauk

Lactation in acute mastitis. Pediatriia no.6:31-34 Je '57.
(MIRA 10:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki I Leningradskogo meditsinskogo instituta imeni akad. I.P.Pavlova (zav. - deystvitel'nyy chlen AMN SSSR A.V.Mel'nikov)
(LACTATION) (BREAST--DISEASES)

SOROKIN, P.A.; MITROPOL'SKIY, A.N.; GADZHIYEV, S.A.; BLESTKINA, T.G.

Changes in certain indexes of cardiovascular function in mitral stenosis following commissurotomy. Terap. arkh. 29 no.8:3-9 '57. (MIRA 11:4)

1. Iz kliniki fakul'tetskoy terapii (nach.-prof. B.A.Beyyer) i iz kliniki khirurgii dlya usovershenstvovaniya vrachey (nach.-prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(COMMISSUROTOMY, postop.- cardiovasc. funct. (Rus)

GADZHIYEV, S. A.

KUPRIYANOV, P.A., professor; GADZHIYEV, S.A., kandidat meditsinskikh nauk; BLESTKINA, T.G.

Should slowly developing rheumatic heart disease be considered a contraindication for mitral commissurotomy? [with summary in English] Khirurgiia 33 no.5:26-32 My '57. (MLRA 10:8)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey (nach. - prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova

(COMMISSUROTOMY
contraindic. of slowly developing rheum. heart dis. for mitral commissurotomy (Rus))

GADZHIYEV, S.A.; BLESTKINA, T.G.

Auricular fibrillation after mitral commissurotomy [with summary in English]. Khirurgiia 33 no.8:56-53 Ag '57. (MIRA 11:4)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach.-deyatvitel'nyy chlen AMN SSR prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(COMMISSUROTOMY, compl.
auric. flutter after mitral commissurotomy)
(AURICULAR FLUTTER, etiol. and pathogen.
mitral commissurotomy)

UVAROV, B.S., SHANIN, Yu.N., kand.med.nauk, GADZHIYEV, S.A., kand.med.nauk

Anesthesia in mitral commissurotomy [with summary in English].
Khirurgiia 34 no.6:66-74 Je '58 (MIRA 11:8)

1. Iz khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey (nach. - destvitel'nyy chlen AMN SSSR prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina Akademii imeni S.M. Kirova.
(COMMISSUROTOMY, anesthesia & analgesia
in mitral stenosis, method (Rus))
(ANESTHESIA,
in commissuroty for mitral stenosis, method (Rus))

GADZHIYEV, S. A.

SOROKIN, P.A., dots.; GADZHIYEV, S.A., kand.med.nauk; MITROPOL'SKIY, A.N., kand.med.nauk (Leningrad)

Some problems in the diagnosis of mitral stenosis in connection with its surgical treatment. Klin.med. 36 no.1:60-67 Ja '58. (MIRA 11:3)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach.-deystvitel'nyy chlen AMN SSSR prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(MITRAL STENOSIS, diag.
problems in evaluation for surg. (Rus)

IZBINSKIY, A.L., kand.med.nauk (Leningrad, D-25, ul. Marata, d.10, kv.6)
GADZHIYEV, S.A., kand.med.nauk, SHAMARINA, T.N., kand.med.nauk.

Standardization of technics in investigating externatl respiration and in cardiac catheterization in mitral stenosis [with summary in English] Vest.khir. 81 no.7:47-57 Jl'58 (MIRA 11:8)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach. - prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(MITRAL STENOSIS, diag.
external resp. impairment & cardiac catheterization, correlation of data (Rus))
(RESPIRATION, function tests,
in mital stenosis (Rus))
(CATHETERIZATION, CARDIAC, in var.dis.
mitral stenosis (Rus))

GADZHIEV S.A.
EXCERPTA MEDICA Sec 9 Vol 13/8 Surgery August 59

4476. SURGICAL ANATOMY OF MITRAL VALVE (Russian text) - Gadzhiev S. A. - VESTN. KHIR. 1958, 81/7 (64-74) Illus. 8

The peculiarities of mitral valve anomalies based on morphological study of 20 human hearts unaffected by pathology and 32 hearts of patients whose deaths were due to mitral valve insufficiency are described. More than 150 commissurotomies were done and the operative data compared with the morphological investigations suggested that the same little stenotic orifice was encountered not only in severely ill patients but also in those who had but few manifestations of the disease. A far advanced stenosis of the left venous orifice is not always accompanied by a marked deformation of leaflets and subvalvular structure. When the commissures, chordae tendineae and papillary muscles are involved in the sclerotic process ossification is often met with. Thus not only stenosis but a marked incompetence of mitral valve arises. (XVIII, 9)

KERIMOV, B.K.; MUKHTAROV, A.I.; GADZHIYEV, S.A.

Longitudinal polarization of an electron-positron pair in the decay of a neutral π-meson. Izv.vys.ucheb.zav.;fiz. no.2:26-30 '60. (MIRA 13:8)

1. Moskovskiy gosuniversitet im. M.V.Lomonosova i Azerbaydzhanskiy gosusiversitet im. S.M.Kirova.
(Mesons--Decay)